

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

June 13, 2014

TO: S. A. Stokes, Technical Director
FROM: D. Gutowski and R. Quirk, Hanford Site Representatives
SUBJECT: Hanford Activity Report for the Week Ending June 13, 2014

Staff Member R. Tontodonato was onsite providing site rep support.

Plutonium Finishing Plant (PFP). The RL Safety System Oversight Engineer (SSO) for confinement ventilation completed an assessment of the PFP exhaust fans. The SSO concluded that impeller cracks in the old safety-significant fans were likely caused by high levels of vibration, rather than the cracks causing high vibration. He noted that two of the six remaining exhaust fans have high levels of vibrations as well as significant cracks in the impeller and suggested that these two fans not be used for routine operations until repaired. The SSO also recommended continued close monitoring of fan vibration and strict enforcement of controls for high vibration.

The contractor began the hazards analysis for a major revision to the safety basis. This revision, which should be provided to RL before the end of the year, will reflect the reduced material at risk remaining as well as the removal of most of the gloveboxes.

The stop work associated with the exothermic reaction in a demister drain line (see Activity report 4/25/14) was lifted following completion of chemical analysis of the material in the line. Additional controls associated with this event are being incorporated into work packages (e.g., mechanical cutting of pipes, tanks, vessels and connected systems).

Tank Farms. The contractor completed operational acceptance testing for the Mobile Arm Retrieval Vacuum System (MARS-V) in single-shell tank C-105 (see Activity Report 6/6/2014) and started retrieval operations from C-105 to AN-106. They were able to transfer supernate from AN-106 to C-105, but the first attempt to use the slurry pump in C-105 was unsuccessful. A second attempt the next night did move a small amount of material to AN-106. The contractor is currently evaluating the slurry pump and other operational anomalies prior to continuing retrieval operations.

618-10 Burial Grounds. Operations in the burial ground have resumed following implementation of near term corrective actions for the spread of contamination outside the radiologically controlled area (see Activity Report 6/6/2014). Additional corrective actions, such as spraying a more robust fixative for contamination control, are still being evaluated.

Waste Treatment Plant. The site reps and staff performed a walkdown of the offgas treatment system and melters in the Low Activity Waste facility as well as the ammonia tanks in the Balance of Facilities.

Waste Receiving and Packaging. Workers stopped work after they identified that the locking device fell off a breaker while the lockout was being independently verified. This is a recurring problem with Square D circuit breakers across the site when a “universal” locking device is used rather than the one designed for these breakers. Contractor management is evaluating why training on the lockout of these breakers has not been effective.